Grade 6[1, 2]—PBA

This blueprint extends Table D.7 in the ITN[3] down into Grade 6, providing more specificity as well as a further iteration of draft design elements covered in the ITN.

Part 1a. Part 1a consists of six (6) tasks, each worth 1 point (these are tasks of Type I.1[4]). Table 6-PBA(1a) lists Evidence Statements for Part(1a). Tasks for this part satisfy the following constraints:

- Each task generates evidence for a single evidence statement in the table and each evidence statement is assessed by at most one task.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- Calculation aids are not provided to students for tasks in Part 1a except for appropriate accessibility purposes

Table 6-PBA(1a). Blueprint for Grade 6 PBA Part 1a

No. Tasks[5]	Probability[6]	Claim Code[7]	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[8]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	1/2	1	6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	i) Expectations for ratios in this grade are limited to ratios of positive whole numbers. (Cf. footnote, CCSS p. 42.)	MP.2	Understand ratio concepts and use ratio reasoning to solve problems.
	1/2	1	6.RP.2	Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*	Expectations for unit rates in this grade are limited to non-complex fractions. (See footnote, CCSS p 42.)	MP.2	Understand ratio concepts and use ratio reasoning to solve problems.
1	1/4	1	6.NS.1-2	Solve word problems involving division of fractions by fractions, *For example, How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	i) Only the answer is required; explanations and representations are not assessed here. (For this part of standard 6.NS.1, see Grade 6 PBA Part 2.) ii) Note that the italicized examples correspond to three meanings/uses of division: (1) equal sharing; (2) measurement; (3) unknown factor. These meanings/uses of division should be sampled equally.	MP.4	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
	1/8	1	6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation	i) Tasks do not require students to perform any computations. ii) Students may be asked to recognize the meaning of 0 in the situation, but will not be asked to explain.	MP.2	Apply and extend previous understandings of numbers to

[1] Note: while concepts of positive and negative rational numbers are part of the standards for Grade 6 (see 6.NS.C), signed number arithmetic is not expected until grade 7 (see 7.NS.A). There will be no addition, subtraction, multiplication, or division involving negative numbers on the grade 6 PBA or EOY test.

[2] Where calculation aids are provided, these perform only the following functions: addition, subtraction, multiplication, and division of signed whole numbers and decimals; negation; square roots; and cube roots

[3] See Table D.7, "Grade 8, Performance Based Assessment Blueprint – Preliminary Draft – Operational portion (equating and field testing items not yet included)," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.

[4] See Table D.2, "Task Types and Descriptions," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.

[5] This is the number of task(s) that will appear on a form to generate evidence for one or more of the indicated evidence statement(s).

[6] Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form. Note that the sum of the probabilities over the indicated set of evidence statements equals the number of tasks to be apportioned among them. Note also that in any case where $T > 1$ tasks are to be apportioned among $E > T$ evidence statements, all E-choose-T unordered T-tuples of distinct evidence statements are considered equally likely. For example, if 3 tasks are to be apportioned among 12 evidence statements, then all 220 possible unordered triples of distinct evidence statements are considered equally likely; it follows that each individual evidence statement has probability 3/12 = 1/4.

[7] **1** = Sub-Claim A but not Sub-Claims C or E. **2** = Sub-Claims A and C. **3** = Sub-Claims A and E. **4** = Sub-Claim D. **5** = Sub-Claim B. (If more than one code is listed, points are divided evenly among listed codes, with any remainder coded to **1**.) See the Grade Summary for totals by claim code.

[8] Practices listed in the top half of the cell indicate that tasks are *ipso facto* Practice-forward for that practice; practices listed in the bottom half are potentially Practice-forward for that practice, depending on the task. See also Appendix F (Revised), "Illustrations of Innovative Task Characteristics," particularly section F(A)(2), "Practice-Forward Tasks," and especially Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)", in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F10407_ITN201231AppendixF11012.pdf; see also Appendix D, "Supporting Design Documents for Mathematics," particularly section IV, "Operationalizing Assessment of the Mathematical Practices," and section V, "Practice-forward tasks," in http://myflorida.com/apps/vbs/adoc/F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf

No. Tasks[5]	Probability[6]	Claim Code[7]	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[8]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
				above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.		MP.5	the system of rational numbers.
	1/8	1	6.NS.6a	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	i) Tasks have "thin context" or no context.	MP.8 MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/8	1	6.NS.6b-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane.	i) Tasks have" thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/8	1	6.NS.6b-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes	i) Tasks have" thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.5, MP.8	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/8	1	6.NS.6c-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram	i) Tasks have" thin context" or no context. ii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/8	1	6.NS.6c-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position pairs of integers and other rational numbers on a coordinate plane.	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). ii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
1	1/5	1	6.EE.1-1	Write numerical expressions involving whole-number exponents.	i) Tasks involve expressing *b*-fold products *a* ·*a*· … · *a* in the form a^b, where *a* and *b* are non-zero whole numbers. ii) Tasks do not require use of the laws of exponents.	MP.8	Apply and extend previous understandings of arithmetic to algebraic expressions.
	4/5	1	6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	i) 50% of tasks require the student to represent an unknown quantity in a real-world or mathematical problem by a variable, and to write an expression and/or equation in terms of the variable. Solving for the unknown is not required. ii) 50% of tasks involve situations in which a variable stands for an arbitrary number in a specified set; this could involve a mathematical property valid for any number, such as 0 + a = a, or a contextual situation involving a range of values (see, e.g., the *Progression* for Expressions and Equations, p. 3).[9]	MP.2, MP.6, MP.7	Reason about and solve one-variable equations and inequalities
1	-	1	5.NF.2-2	Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers to word problems involving addition and subtraction of fractions referring to the same whole in cases of unlike denominators. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.*	i) The situation types are those shown in Table 2, p. 9 of the *Progression* for Operations and Algebraic Thinking, sampled equally.[10] ii) Prompts do not provide visual fraction models; students may at their discretion draw visual fraction models as a strategy.	MP.2, MP.7 MP.5	Use equivalent fractions as a strategy to add and subtract fractions.

[9] http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_ee_2011_04_25.pdf

[10] http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf. While Table 2 in the *Progression* for Operations and Algebraic Thinking is phrased in terms appropriate for whole numbers, changes of phrasing are generally necessary in fraction contexts. The point of referencing Table 2 is to reference the quantitative relationships it describes, not the exact wording of its examples.

No. Tasks[5]	Probability[6]	Claim Code[7]	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[8]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-	1	5.NF.3-2	Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*	i) Prompts do not provide visual fraction models; students may at their discretion draw visual fraction models as a strategy. ii) Note that one of the italicized examples in standard 5.NF.3 is a two-prompt problem.	MP.1, MP.4 MP.5	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
1	-	1	5.NF.7c	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[11] c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*	i) Tasks involve equal group (partition) situations with part size unknown and number of parts unknown. (See Table 2, CCSS p 89) ii) Prompts do not provide visual fraction models; students may at their discretion draw visual fraction models as a strategy.	MP.2, MP.7 MP.5	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

[11] Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade. *(Footnote in CCSSM, p. 36.)*

Part 1b. Part 1b consists of two (2) tasks, each worth 1 point (these are tasks of Type I.1).

- Each task generates evidence for a single evidence statement in the table and each evidence statement is assessed by at most one task.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- A calculation aid of the specified kind can be provided to students for these tasks..[12]

Table 6-PBA(1b). Blueprint for Grade 6 PBA Part 1b

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	1/8	1	6.EE.1-2	Evaluate numerical expressions involving whole-number exponents.	i) Tasks may involve simple fractions raised to small whole-number powers, e.g. (1/2)3, (2/3)2. ii) Tasks may involve nonnegative decimals raised to whole-number powers. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.iv) Tasks do not have a context.	MP.8	Apply and extend previous understandings of arithmetic to algebraic expressions.
	3/8	1	6.EE.2a	Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.8	Apply and extend previous understandings of arithmetic to algebraic expressions
	1/8	1	6.EE.2b	Write, read, and evaluate expressions in which letters stand for numbers. b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions
	2/8	1	6.EE.2c-1	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions at specific values of their variables. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions.
	1/8	1	6.EE.2c-2	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions that arise from formulas used in real-world problems at specific values of their variables. *For example, use the formulas $V = s^3$ and $A = 6 s^2$to find the volume and surface area of a cube with sides of length s = 1/2.*	i) Tasks are simple applications of formulas that are provided in the prompt. ii) Tasks do not require the student to manipulate the formula or isolate variables to solve an equation. iii) Tasks have "thin context" or no context. iv) Numerical values in these expressions may include whole numbers, fractions, and decimals. v) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions
1	1/2	1	6.EE.5-1	Understand solving an equation as a process of answering a question: which values from a specified set, if any, make the equation true?	i) 80% of tasks involve values from an infinite set of nonnegative numbers (e.g., even numbers; whole numbers; fractions). 20% of tasks involve values from a finite set of nonnegative numbers (e.g, {2, 5, 7, 9}). ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks..	MP.5, MP.6	Reason about and solve one-variable equations and inequalities
	1/2	1	6.EE.5-2	Use substitution to determine whether a given number in a specified set makes an inequality true.	i) 80% of tasks involve values from an infinite set of nonnegative numbers (e.g., even numbers; whole numbers; fractions). 20% of tasks involve values from a finite set of nonnegative numbers (e.g, {2, 5, 7, 9}).	MP.6	Reason about and solve one-variable equations and

[12]. If so, then students will not be able to return to tasks in Table 6-PBA(1a)) after beginning work on these tasks.

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
					ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.		inequalities

Part 1c. Part 1c consists of two (2) tasks worth 2 points, totaling 4 points in all.

Table 6-PBA(1c) (see below) lists evidence statements for Part 1c. Tasks for this part satisfy the following constraints:

- Each task generates evidence for a single evidence statement in the table and each evidence statement is assessed by at most one task.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- A calculation aid of the specified kind can be provided to students for these tasks.[13]

Table 6-PBA(1c). Evidence Statements for Grade 6 PBA Part 1c

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	1	1	6.RP.3a	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.4, MP.5, MP.7, MP.8	Understand ratio concepts and use ratio reasoning to solve problems.
1	1/2	1	6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	i) Problem situations are of "algebraic" type, not "arithmetic" type. See ITN, Appendix F, Table F.d and the *Progression* for Expressions and Equations, pp. 3,4.[14] ii) 50% of tasks involve whole-number values of p, q, and/or x; 50% of tasks involve fraction or decimal values of p, q, and/or x. Fractions and decimals should not appear together in the same problem. (Cf. 7.EE.3.) iii) A valid equation and the correct answer are both required for full credit. iv) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.1, MP.2, MP.6, MP.7	Reason about and solve one-variable equations and inequalities
1	1/2	1	6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.*	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.4, MP.6, MP.8	Represent and analyze quantitative relationships between dependent and independent variable

[13] If so, then students will not be able to return to tasks in Table 6-PBA(1a) after beginning work on these tasks.

[14] http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_ee_2011_04_25.pdf

Part 2.

Sub Claim C: Highlighted Practices MP.3,6 with Connections to Content: expressing mathematical reasoning. The student expresses grade/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.

The formulation *"Use drawings, words, and/or equations"* can be useful in tasks generating evidence for Claim C (expressing mathematical reasoning).

Assessing students' expressions of mathematical reasoning typically requires some hand scoring of tasks. However, PARCC is interested in possible technological innovations that can allow tasks assessing this aspect of the standards to be machine scored or partially machine scored. PARCC is also interested in transformative technological innovations that can enrich the range of activities beyond what is possible with a paper test (e.g., assembling shapes to prove or disprove a conjecture).

Part 2 consists of four (4) tasks: two (2) three-point tasks and two (2) four-point tasks, totaling 14 points in all.

Table 6-PBA(2) (see below) lists evidence statements for Part 2. Tasks for this part satisfy the following constraints:

- Each task on Part 2 generates evidence for a single evidence statement in the table and each evidence statement is assessed by at most one task.
- The number of tasks in each content and process domain is specified by the Form Construction Tables.
- Evidence Statements within a given content or process domain are equally likely to be assessed.
- For Evidence Statements with more than one standard listed within the Content Scope, contractors may select one or more while keeping a balanced pool.
- A calculation aid of the specified kind can be provided to students for these tasks.[15]

Table 6-PBA(2).[16] Evidence Statements for Grade 6 PBA Part 2

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
2	6.C.1.1	Base explanations/reasoning on the properties of operations.[17] Content Scope: Knowledge and skills articulated in 6.EE.3, 6.EE.4	-	MP.3, PM.6, and MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions
2	6.C.2	Base explanations/reasoning on the relationship between addition and subtraction or the relationship between multiplication and division.[18] Content Scope: Knowledge and skills articulated in 6.NS.1	-	MP.2, MP.3, MP.4, and MP.6	
2	6.C.3	Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 6.NS.1	-	MP.2, MP.3, MP.4, MP.5 and MP.6	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
2	6.C.4	Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 6.NS.6, 6.NS.7	-	MP.3, MP.5 and MP.6	Apply and extend previous understandings of numbers to the system of rational numbers.

[15] If so, then students will not be able to return to tasks in Table 6-PBA(1a) after beginning work on these tasks.
[16] This table need not be considered complete or final. For context see Appendix D, "Sub Sub-Claim C: Highlighted Practices MP.3,6 with Connections to Content: expressing mathematical reasoning," particularly "Evidence Statements for Sub-Claim C," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf. Note also that some Dana Center prototype tasks for sub-claim C will include possible candidates for evidence statements for sub-claim C.
[17] Properties of operations are a recurring theme throughout the standards to foster coherence and build a bridge from arithmetic to algebra. "These Standards endeavor to follow [a coherent] design, not only by stressing conceptual understanding of key ideas, but also by continually returning to organizing principles such as place value or the properties of operations to structure those ideas." (CCSSM, p. 4)
[18] The relationships between inverse operations are a recurring theme throughout the arithmetic progressions in the standards (see 1.OA.4, 1.NBT.4, 1.NBT.6, 2.NBT.5, 2.NBT.7, 3.NBT.2, 3.OA.6, 4.NBT.5, 4.NBT.6, 4.NF.3c, 5.NBT.6, 5.NBT.7, 5.NF.3 (italics), 5.NF.7a (italics), 5.NF.7b (italics), 6.NS.1 (italics), 7.NS.1, 7.NS.2. This list does not include the way that the relationships between inverse operations factor into work with word problems in the OA progression.

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
2	6.C.5	Base explanations/reasoning on a coordinate plane diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 6.NS.6, 6.NS.7, 6.NS.8	-	MP.3, MP.4, MP.5 and MP.6	Apply and extend previous understandings of numbers to the system of rational numbers.
2	6.C.6	Given an equation or system of equations, present the solution steps as a logical argument that concludes with the set of solutions (if any).[19] Content Scope: Knowledge and skills articulated in 6.EE.B	-	MP.3, and MP.6	Reason about and solve one-variable equations and inequatlities.
2	6.C.7	Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. Content Scope: Knowledge and skills articulated in 6.EE.4	-	MP.3. and MP.6	Apply and extend previous understandings of arithmetic to algebraic expressions
2	6.C.8.1	Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 6.RP.A	-	MP.2, MP..3,and MP.6	Understand ration concepts and use ration reasoning to solve problems
2	6.C.8.2	Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 6.EE.9	-	MP.2,MP.3, and MP.6	Represent and analyze quantitative relationships between dependent and independent variable

[19] See ITN Appendix F, Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)," MP.6 (Attend to precision); see also ITN Appendix D, "How the Claim Derives from the Standards," in "Sub-Claim C: Highlighted Practices MP.3,6 with Connections to Content: Expressing Mathematical Reasoning." Reasoned solving is a theme in the standards from grade 6 on into high school (cf. 6.EE.5, 8.EE.5, A-REI.A). See also PARCC Model Content Frameworks, p. 56.

Part 3a.

Sub Claim D: Highlighted Practice MP.4 with Connections to Content: modeling/application. The student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course (or, for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), *engaging particularly in the Modeling practice*, and where helpful making sense of problems and persevering to solve them (MP.1), reasoning abstractly and quantitatively (MP.2), using appropriate tools strategically (MP.5), looking for and making use of structure (MP.7), and/or looking for and expressing regularity in repeated reasoning (MP.8).

Part 3a consists of two (2) tasks, each worth three points, totaling 6 points in all.

- There is one evidence statement for Part 3a, given in Table 3-PBA(3a) below.
- Both tasks should assess the following evidence statement with sufficient variety.
- When utilizing an Evidence Statement from PBA(1a) or PBA(1b) please note the "clarifications, limits and emphases" that accompanies the Evidence Statement.
- A calculation aid of the specified kind can be provided to students for these tasks.[20]

Table 6-PBA(3a).[21] Evidence Statement for Grade 6 PBA Part 3a

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
4	6.D.1	Solve multi-step contextual word problems with degree of difficulty appropriate to Grade 6, requiring application of knowledge and skills articulated in 6-PBA(1a), 6-PBA(1b) and 6-PBA(1c).	Tasks may have scaffolding if necessary in order yield a degree of difficulty appropriate to Grade 6.	MP.4 MP.1, MP.2, MP.5, MP.7	-

[20] If so, then students will not be able to return to tasks in Table 6-PBA(1a) after beginning work on these tasks.
[21] This table need not be considered complete or final. For context see Appendix D, "Sub Sub-Claim C: Highlighted Practices MP.3,6 with Connections to Content: expressing mathematical reasoning," particularly "Evidence Statements for Sub-Claim C," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf. Note also that some Dana Center prototype tasks for sub-claim C will include possible candidates for evidence statements for sub-claim C.

Part 3b.

Sub Claim D: Highlighted Practice MP.4 with Connections to Content: modeling/application. The student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course (or, for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), *engaging particularly in the Modeling practice*, and where helpful making sense of problems and persevering to solve them (MP.1), reasoning abstractly and quantitatively (MP.2), using appropriate tools strategically (MP.5), looking for and making use of structure (MP.7), and/or looking for and expressing regularity in repeated reasoning (MP.8).

Part 3b consists of one (1) task worth six points.

Table 6-PBA(3b) (see below) lists evidence statements for Part 3b. Tasks for this part satisfy the following constraints:

- Each task on Part 3b generates evidence for a single one of these evidence statements.
- On each of the Evidence Statements in Table 6-PBA(3b) is equally likely to be assessed.
- A calculation aid of the specified kind can be provided to students for these tasks.[22]

Table 6-PBA(3b).[23] Equiprobable Evidence Statements for Grade 6 PBA Part 3b

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
4	6.D.2	Solve multi-step contextual problems with degree of difficulty appropriate to Grade 6, requiring application of knowledge and skills articulated in 5.NBT.B, 5.NF, 5.MD, and 5.G.A.	Tasks may have scaffolding if necessary in order yield a degree of difficulty appropriate to Grade 6.	MP.4 MP.1, MP.2, MP.5, MP.7	-
4	6.D.3	Reasoned estimates: Use reasonable estimates of known quantities in a chain of reasoning that yields an estimate of an unknown quantity.[24] Content Scope: Knowledge and skills articulated in 5.NBT.B, 5.MD	Tasks may have scaffolding if necessary in order yield a degree of difficulty appropriate to Grade 6.	MP.4 MP.1, MP.2, MP.5, MP.7	-

[22] If so, then students will not be able to return to tasks in Table 6-PBA(1a) after beginning work on these tasks.
[23] This table need not be considered complete or final. For context see Appendix D, "Sub Sub-Claim C: Highlighted Practices MP.3,6 with Connections to Content: expressing mathematical reasoning," particularly "Evidence Statements for Sub-Claim C," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf. Note also that some Dana Center prototype tasks for sub-claim C will include possible candidates for evidence statements for sub-claim C.
[24] See Appendix F (Revised), "Illustrations of Innovative Task Characteristics," section F(A)(2), "Practice-Forward Tasks," Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)", row 4 ("Model with mathematics"), in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F10407_ITN201231AppendixF11012.pdf; see also Appendix D, "Supporting Design Documents for Mathematics," section I, "Assessment Claims in Mathematics," subsection "Evidence Statements for Sub-Claim D," in http://myflorida.com/apps/vbs/adoc/F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf

Grade 6—EOY

This blueprint extends Table D.8 in the ITN[25] down into Grade 6, providing more specificity as well as a further iteration of draft design elements covered in the ITN.

Part 1a. Part (1a) consists of twenty (20) tasks, each worth 1 point.[26]

- Each task generates evidence for a single evidence statement in the table.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- Calculation aids are not provided to students for tasks in Part 1a except for appropriate accessibility purposes.[27]

Table 6-EOY(1a). Blueprint for Grade 6 EOY Part 1a

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-	1	6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	i) Expectations for ratios in this grade are limited to ratios of positive whole numbers. (Cf. footnote, CCSS p. 42.)	MP.2	Understand ratio concepts and use ratio reasoning to solve problems.
1	-	1	6.RP.2	Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*[1]	i) Expectations for unit rates in this grade are limited to non-complex fractions. (See footnote, CCSS p 42.)	MP.2	Understand ratio concepts and use ratio reasoning to solve problems.
2	-	1	6.NS.1-2	Solve word problems involving division of fractions by fractions, *For example, How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	i) Only the answer is required; explanations and representations are not assessed here. (For this part of standard 6.NS.1, see Grade 6 PBA Part 2.) ii) Note that the italicized examples correspond to three meanings/uses of division: (1) equal sharing; (2) measurement; (3) unknown factor. These meanings/uses of division should be sampled equally.	MP.4	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
1	1/2	1	6.NS.6c-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram	i) Tasks have thin context or no context. ii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/2	1	6.NS.6a	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	i) Tasks have "thin context" or no context.	MP.8 MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
1	1/4	1	6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below	i) Tasks do not require students to perform any computations. ii) Students may be asked to recognize the meaning of 0 in the situation, but will not be asked to explain.	MP.2	Apply and extend previous understandings of numbers to

[25] See Table D.3, "Grade 3, Performance Based Assessment Blueprint – Preliminary Draft – Operational portion (equating and field testing items not yet included)," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.
[26] These are tasks of Type I.1; see Table D.2, "Task Types and Descriptions," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.
[27]

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
				zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.		MP.5	the system of rational numbers.
	1/4	1	6.NS.6b-1	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane.	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/4	1	6.NS.6b-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. b. Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). iii) Coordinates are not limited to integers.	MP.5, MP.8	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/4	1	6.NS.6c-2	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. c. Find and position pairs of integers and other rational numbers on a coordinate plane.	i) Tasks have "thin context" or no context. ii) Students need not recognize or use traditional notation for quadrants (such as I, II, III, IV). ii) Coordinates are not limited to integers.	MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
2	1/3	1	6.NS.7a	Understand ordering and absolute value of rational numbers. a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*	i) Tasks do not have a context. ii) Tasks are not limited to integers.	MP.5, (2?)	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/3	1	6.NS.7b	Understand ordering and absolute value of rational numbers. b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 °C > –7 °C to express the fact that –3 °C is warmer than –7 °C.*	i) Tasks are not limited to integers. ii) Tasks do not require students to explain. (For this part of standard 6.NS.7, see Grade 6 PBA Part 2.)	MP.2, MP.3, MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/3	1	6.NS.7c-1	Understand ordering and absolute value of rational numbers. c. Understand the absolute value of a rational number as its distance from 0 on the number line.	i) Tasks do not have a context. iii) Tasks are not limited to integers.	MP.2,MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/3	1	6.NS.7c-2	Understand ordering and absolute value of rational numbers. c. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.*	i) Tasks have a context. ii) Tasks are not limited to integers.	MP.2	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/3	1	6.NS.7d	Understand ordering and absolute value of rational numbers. d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*	I) Pool should contain tasks with and without contextsi) Tasks are not limited to integers. ii) Prompts do not present students with a number line diagram, but students may draw a number line diagram as a strategy.	MP.2 MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
	1/3	1	6.NS.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	I) Pool should contain tasks with and without contextsii) Finding distances is limited to points with integer coordinates.	MP.1, MP.2, MP.5	Apply and extend previous understandings of numbers to the system of rational numbers.
2	-	1	6.EE.4	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*	-	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-	1	6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	i) 50% of tasks require the student to represent an unknown quantity in a real-world or mathematical problem by a variable, and to write an expression and/or equation in terms of the variable. Solving for the unknown is not required. ii) 50% of tasks involve situations in which a variable stands for an arbitrary number in a specified set; this could involve a mathematical property valid for any number, such as 0 + a = a, or a contextual situation involving a range of values (see, e.g., the *Progression* for Expressions and Equations, p. 3).[28]	MP.2, MP.6, MP.7	Reason about and solve one-variable equations and inequalities
1	1/2	1	6.EE.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	i) Constraint values (denoted c in standard 6.EE.8) are not limited to integers.	MP.2, MP.6, MP.7	Reason about and solve one-variable equations and inequalities
	1/2	1	6.EE.1-1	Write numerical expressions involving whole-number exponents.	i) Tasks involve expressing b-fold products $a \cdot a \cdot \ldots \cdot a$ in the form a^b, where a and b are non-zero whole numbers. ii) Tasks do not require use of the laws of exponents.	MP.8	Apply and extend previous imderstandings of arithmetic to algebraic expressions
1	-	1	5.NBT.Int.1	Perform exact or approximate multiplications and/or divisions that are best done mentally by applying concepts of place value, rather than by applying multi-digit algorithms or written strategies.	i) Tasks do not have a context. ii) See ITN Appendix F, section A, "Illustrations of Innovative Task Characteristics," subsection 4, "Integrative tasks with machine scoring of responses entered by computer interface," subsection "Illustrations at the domain level."	MP.1, MP.7	5.NBT.A, 5.NBT.B
1	-	1	5.NBT.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	i) Tasks do not require students to illustrate or explain. (For this part of standard 5.NBT.6, see Grade 5 PBA Part 2.) ii) Only the answer is required. iii Tasks involve 3- or 4-digit dividends and one- or two-digit divisors.	MP.1 MP.5	Perform operations with multi-digit whole numbers and with decimals to hundredths.
1	-	1	5.NBT.7-2	Subtract two decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	i) Tasks do not have a context. ii) Only the difference is required; explanations are not assessed here. (For this part of standard 5.NBT.7, see Grade 5 PBA Part 2.) iii) Prompts may include visual models, but prompts must also present the subtrahend and minuend as numbers, and the answer sought is a number, not a picture. iv) The subtrahend and minuend are each greater than or equal to 0.01 and less than or equal to 99.99. Positive differences only. (Every included subtraction problem is an unknown-addend problem included in 5.NBT.7-1.) v) 20% of cases involve a whole number—either the difference is a whole number, or the subtrahend is a whole number presented without a decimal point, or the minuend is a whole number presented without a decimal point. (The subtrahend and minuend cannot both be whole numbers.)	MP.7 MP.5	Perform operations with multi-digit whole numbers and with decimals to hundredths.
1	-	1	5.NBT.7-4	Divide in problems involving tenths and/or hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	i) Tasks do not have a context. ii) Only the quotient is required; explanations are not assessed here. (For this part of standard 5.NBT.7, see Grade 5 PBA Part 2.) iii) Prompts may include visual models, but prompts must also present the dividend and divisor as numbers, and the answer sought is a number, not a picture. iv) Divisors are of the form XY, X0, X, X.Y, 0.XY, 0.X, or 0.0X (cf. 5.NBT.6), where X and Y represent non-zero digits. Dividends are of the form XYZ.W, XY0.Z, X00.Y, XY.Z, X0.Y, X.YZ, X.Y, X.0Y, 0.XY, or 0.0X, where X, Y, Z, and W represent non-zero digits. *[[Also add XY, X0, and X]]* v) Quotients are either whole numbers or else decimals terminating at the tenths or hundredths place. (Every included division problem is an unknown-factor problem included in 5.NBT.7-3.) vi) 20% of cases involve a whole number—either the quotient is a whole number, or the dividend is a whole number presented without a decimal point, or the divisor is a whole number presented without a decimal point. (If the quotient is a whole number, then neither the divisor nor the dividend can be a whole number.)	MP.7 MP.5	Perform operations with multi-digit whole numbers and with decimals to hundredths.

[28] http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_ee_2011_04_25.pdf

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-		5.NF.2-1	Solve word problems involving addition and subtraction of fractions referring to the same whole, in cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem.	i) The situation types are those shown in Table 2, p. 9 of the *Progression* for Operations and Algebraic Thinking, sampled equally across rows and, within rows, sampled equally across columns.[29] ii) Prompts do not provide visual fraction models; students may at their discretion draw visual fraction models as a strategy.	MP.1, MP.5	Use equivalent fractions as a strategy to add and subtract fractions
1	-	1	5.NF.5a	Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	i) Insofar as possible, tasks are designed to be completed without performing the indicated multiplication. ii) Products involve at least one factor that is a fraction or mixed number.	MP.7, MP.8	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
1	-	1	5.NF.6-1	Solve real world problems involving multiplication of fractions, e.g., by using visual fraction models or equations to represent the problem.	i) Tasks do not involve mixed numbers. ii) Situations include area and comparison/times as much, with product unknown. (See Table 2, p. 89 of CCSS and Table 3, p. 23 of the *Progression* for Operations and Algebraic Thinking). iii) Prompts do not provide visual fraction models; students may at their discretion draw visual fraction models as a strategy.	MP.1, MP.4.1 MP.5	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
1	-	1	5.MD.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	i) Tasks assess conceptual understanding of volume (see 5.MD.3) as applied to a specific situation—not applying a volume formula.	MP.7	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

[29] http://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf. While Table 2 in the *Progression* for Operations and Algebraic Thinking is phrased in terms appropriate for whole numbers, changes of phrasing are generally necessary in fraction contexts. The point of referencing Table 2 is to reference the quantitative relationships it describes, not the exact wording of its examples.

Part 1b. Part 1b consists of five (5) tasks, each worth 1 point.[30]

- Each task generates evidence for a single evidence statement in the table.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- A calculation aid of the specified kind can be provided to students for these tasks.[31]

Table 6-EOY(1b). Blueprint for Grade 6 EOY Part 1b

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-	1	6.RP.3a	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.4, MP.5, MP.7, MP.8	Understand ratio concepts and use ratio reasoning to solve problems.
1	-	1	6.RP.3c-1	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity);	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks. ii) Pool should contain tasks with and without contexts	MP.2, MP.7 MP.5, MP.8	Understand ratio concepts and use ratio reasoning to solve problems.
1	-	1	6.RP.3d	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	I) Pool should contain tasks with and without contextsii) Tasks require students to multiply and/or divide dimensioned quantities and correctly express the units of the result. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.6, MP.7 MP.5, MP.8	Understand ratio concepts and use ratio reasoning to solve problems.
2	2/7	1	6.EE.2a	Write, read, and evaluate expressions in which letters stand for numbers. a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.8	Apply and extend previous understandings of arithmetic to algebraic expressions
	2/7	1	6.EE.1-2	Evaluate numerical expressions involving whole-number exponents.	i) Tasks may involve simple fractions raised to small whole-number powers, e.g. $(1/2)^3$, $(2/3)^2$. ii) Tasks may involve nonnegative decimals raised to whole-number powers. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.iv) Tasks do not have a context.	MP.8	Apply and extend previous understandings of arithmetic to algebraic expressions
	2/7	1	6.EE.2b	Write, read, and evaluate expressions in which letters stand for numbers. b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.*	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks..	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions
	2/7	1	6.EE.2c-1	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions at specific values of their variables. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	i) Tasks do not have a context. ii) Numerical values in these expressions may include whole numbers, fractions, and decimals. iii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions

[30] These are tasks of Type I.1; see Table D.2, "Task Types and Descriptions," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.
[31] If so, then students will not be able to return to tasks in Table 6-EOY (1a) or Table 6-EOY (2) after beginning work on these tasks.

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
	2/7	1	6.EE.2c-2	Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions that arise from formulas used in real-world problems at specific values of their variables. *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.*	i) Tasks are simple applications of formulas that are provided in the prompt. ii) Tasks do not require the student to manipulate the formula or isolate variables to solve an equation. iii) Tasks have "thin context" or no context. iv) Numerical values in these expressions may include whole numbers, fractions, and decimals. v) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.7	Apply and extend previous understandings of arithmetic to algebraic expressions
	2/7	1	6.EE.5-1	Understand solving an equation as a process of answering a question: which values from a specified set, if any, make the equation true?	i) 80% of tasks involve values from an infinite set of nonnegative numbers (e.g., even numbers; whole numbers; fractions). 20% of tasks involve values from a finite set of nonnegative numbers (e.g, {2, 5, 7, 9}). ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.5, MP.6	
	2/7	1	6.EE.5-2	Use substitution to determine whether a given number in a specified set makes an inequality true.	i) 80% of tasks involve values from an infinite set of nonnegative numbers (e.g., even numbers; whole numbers; fractions). 20% of tasks involve values from a finite set of nonnegative numbers (e.g, {2, 5, 7, 9}). ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.5, MP.6	Reason about and solve one-variable equations and inequalities

Part 2. Part 2 consists of seven (7) tasks, each worth 1 point.[32] Table 6-EOY(2) lists Evidence Statements for Part 2. Tasks for this part satisfy the following constraints:

- Each task generates evidence for a single evidence statement in the table and each evidence statement is assessed by at most one task.
- The number of tasks in each content domain is specified by the Form Construction Tables.
- Probabilities are given in cases where sampling is necessary (because the number of tasks in the leftmost column is less than the number of corresponding evidence statements). In these cases, the probability column specifies the probability that any given evidence statement will be assessed on any given form.
- Calculation aids are not provided to students for tasks in Part 2 except for appropriate accessibility purposes.[33]

Table 6-EOY(2). Blueprint for Grade 6 EOY Part 2

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	-	3, 5[34]	6.NS.2	Fluently divide multi-digit numbers using the standard algorithm.	i) Tasks assess fluency implicitly; simply in virtue of the fact that there are two substantial computations on the EOY (see also 6.NS.3-1, 6.NS.3-2, 6.NS.3-3, 6.NS.3-4). Tasks need not be timed. ii) The given dividend and divisor are such as to require an efficient/standard algorithm (e.g., 40584 ÷ 76). Numbers in the task do not suggest any obvious *ad hoc* or mental strategy (as would be present for example in a case such as 40064 ÷ 16). iii) Tasks do not have a context. iv) Only the answer is required. v) Tasks have five-digit dividends and two-digit divisors, with or without remainder.		Compute fluently with multi-digit numbers and find common factors and multiples.
1	1/6	3,5	6.NS.3-1	Fluently add multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the sum is required iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given addends are such as to require an efficient/standard algorithm (e.g., 72.63 + 4.875). Addends in the task do not suggest any obvious *ad hoc* or mental strategy (as would be present for example in a case such as16.999 + 3.501). v) Each addend is greater than or equal to 0.001 and less than or equal to 99.999.	-	Compute fluently with multi-digit numbers and find common factors and multiples.
	1/6	3,5	6.NS.3-2	Fluently subtract multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the difference is required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given subtrahend and minuend are such as to require an efficient/standard algorithm (e.g., 177.3 – 72.635). The subtrahend and minuend do not suggest any obvious *ad hoc* or mental strategy (as would be present for example in a case such as 20.5 – 3.501). v) The subtrahend and minuend are each greater than or equal to 0.001 and less than or equal to 99.999. Positive differences only. (Every included subtraction problem is an unknown-addend problem included in 6.NS.3-1.)	-	Compute fluently with multi-digit numbers and find common factors and multiples.
	1/2	3,5	6.NS.3-3	Fluently multiply multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only the product is required iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given factors are such as to require an efficient/standard algorithm (e.g., 72.3 × 4.87). Factors in the task do not suggest any obvious *ad hoc* or mental strategy. v) Problems are effectively 3-digit x 3-digit or 2-digit by 5-digit. (For example, 7.68 x 15.3 or 0.35 x 18.241.)	-	Compute fluently with multi-digit numbers and find common factors and multiples.
	1/6	3,5	6.NS.3-4	Fluently divide multi-digit decimals using the standard algorithm.	i) Tasks do not have a context. ii) Only thequotientis required. iii) Prompts do not include visual models. The answer sought is a number, not a picture. iv) The given dividend and divisor are such as to require an efficient/standard algorithm (e.g., 177.3 ÷ 0.36). The dividend and divisor do not suggest any obvious *ad hoc* or mental strategy v) Problems are effectively 4-digit ÷ 2-digit or 3-digit ÷ 3-digit. (For example, 14.28 ÷ 0.68 or 2.394 ÷ 0.684). vi) Every quotient is a whole number or a decimal terminating at the tenths, hundredths, or thousandths place. Every included division problem is an unknown-factor problem included in 6.NS.3-3.)	-	Compute fluently with multi-digit numbers and find common factors and multiples.

[32] These are tasks of Type I.1; see Table D.2, "Task Types and Descriptions," in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf.

[33]

[34] In general, Sub-Claim E falls within Sub-Claim A, that is, fluency work required by the standards falls within the major work of the grade. However, in grade 6, the cluster containing the fluency standards is designated Additional work.

No. Tasks	Probability	Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	1/2	5	6.NS.4-1	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12.	i) Tasks do not have a context. ii) Tasks require students to find the greatest common factor or the least common multiple only.	-	Compute fluently with multi-digit numbers and find common factors and multiples.
	1/2	5	6.NS.4-2	Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4 (9 + 2).*	i) Tasks do not have a context.	MP.7	Compute fluently with multi-digit numbers and find common factors and multiples.
1	-	5	6.G.2-1	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism.	i) Tasks do not have a context. ii) Tasks focus on the connection between packing the solid figure and computing the volume.	MP.2	Solve real-world and mathematical problems involving area, surface area, and volume.
1	1/2	5	6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*	-	-	Develop understanding of statistical variability.
	1/2	5	6.SP.2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	i) For example, tasks might present several distributions graphically and ask which two have nearly the same center, nearly the same spread, or nearly the same overall shape.	MP.4	Develop understanding of statistical variability.
1	-	5	6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	i) For example, tasks might ask students to rate statements True/False/Not Enough Information, such as, "The average height of trees in Watson Park is 65 feet. Are there any trees in Watson Park taller than 65 feet?"	MP.4	Develop understanding of statistical variability.
1	-	5	6.SP.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	i) Tasks are technology-enhanced to make creation of the plots as quick and effortless as possible; or tasks ask the student to identify which display corresponds to a given set of data.	MP.2, MP.5	Summarize and describe distributions.

Part 3a. Part 3a consists of one (1) two-point task and one (1) four-point task, totaling 6 points in all.

- There is one evidence statement for Part 3a, given in Table 6-EOY(3a) below.
- Both tasks should assess the following evidence statement with sufficient variety.
- A calculation aid of the specified kind can be provided to students for these tasks.[35]

Table 6-EOY(3a). Evidence Statement for Grade 6 EOY Part 3a

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[36]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	6.RP.3b	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*	i) See ITN Appendix F, Table F.c, "Minimizing or avoiding common drawbacks of selected response," specifically, Illustration 1 (in contrast to the problem "A bird flew 20 miles in 100 minutes. At that speed, how long would it take the bird to fly 6 miles?") ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks. iii) Expectations for unit rates in this grade are limited to non-complex fractions. (See footnote, CCSS p 42)	MP.2, MP.8 MP.5	Understand ratio concepts and use ratio reasoning to solve problems.

[35] If so, then students will not be able to return to tasks in Table 6-EOY (1a) or Table 6-EOY (2) after beginning work on these tasks

[36] See Appendix F (Revised), "Illustrations of Innovative Task Characteristics," particularly section F(A)(2), "Practice-Forward Tasks," and especially Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)", in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F10407_ITN201231AppendixF11012.pdf; see also Appendix D, "Supporting Design Documents for Mathematics," particularly section IV, "Operationalizing Assessment of the Mathematical Practices," and section V, "Practice-forward tasks," in http://myflorida.com/apps/vbs/adoc/F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf

Part 3b. Part 3b consists of three (3) two-point tasks, totaling 6 points in all.

Table 6-EOY(3b) (see below) lists evidence statements for Part 3b.

- Each task on Part 3b generates evidence for a single evidence statement in the table and each Evidence Statement is assessed by at most one task
- The number of tasks in each Content Domain is specified by the Form Construction Tables.
- Evidence Statements within a given Content Domain are equally likely to be assessed.
- A calculation aid of the specified kind can be provided to students for these tasks.[37]

Table 6-EOY(3b). Evidence Statements for Grade 6 EOY Part 3b

Claim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[38]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
1	6.RP.3c-2	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. c. Solve problems involving finding the whole, given a part and the percent.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.7 MP.5, MP.8	Understand ratio concepts and use ratio reasoning to solve problems.
1	6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	i) Problem situations are of "algebraic" type, not "arithmetic" type. See ITN, Appendix F, Table F.d and the *Progression* for Expressions and Equations, pp. 3,4.[39] ii) 50% of tasks involve whole-number values of p, q, and/or x; 50% of tasks involve fraction or decimal values of p, q, and/or x. Fractions and decimals should not appear in the same problem. (Cf. 7.EE.3.) iii) A valid equation and the correct answer are both required for full credit. iv) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.1, MP.2, MP.6, MP.7	Reason about and solve one-variable equations and inequalities
1	6.EE.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.*	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.2, MP.4,MP.6, MP.8	Represent and analyze quantitative relationships between dependent and independent variables

[37] If so, then students will not be able to return to tasks in Table 6-EOY (1a) or Table 6-EOY (2) after beginning work on these tasks

[38] See Appendix F (Revised), "Illustrations of Innovative Task Characteristics," particularly section F(A)(2), "Practice-Forward Tasks," and especially Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)", in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F10407_ITN201231AppendixF11012.pdf; see also Appendix D, "Supporting Design Documents for Mathematics," particularly section IV, "Operationalizing Assessment of the Mathematical Practices," and section V, "Practice-forward tasks," in http://myflorida.com/apps/vbs/adoc/F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf

[39] http://commoncoretools.files.wordpress.com/2011/04/ccss_progression_ee_2011_04_25.pdf.

Part 3c. Part 3c consists of five (2) two-point tasks, totaling 10 points in all.

Table 6-EOY(3c) (see below) lists evidence statements for Part 3c.

- Each task on Part 3c generates evidence for a single evidence statement in the table and each Evidence Statement is assessed by at most one task.
- The distribution of tasks across Content Areas is specified by the Form Construction Tables.
- Evidence Statements within a given Content Domain are equally likely to be assessed.
- A calculation aid of the specified kind can be provided to students for these tasks.[40]

Table 6-EOY(3c). Evidence Statements for Grade 6 EOY Part 3c

aim Code	Evidence Statement Key	Evidence Statement Text	Clarifications, limits, emphases, and other information intended to ensure appropriate variety in tasks	Relationship to Mathematical Practices[41]	*Relevant CCSSM cluster heading (for reference and to remind developers of the general goals of the standards in this area)*
5	6.G.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks	MP.1,MP.2, MP.5, MP.7	Solve real-world and mathematical problems involving area, surface area, and volume.
5	6.G.2-2	Apply the formulas $V = l\,w\,h$ and $V = B\,h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	i) Tasks focus using the formulas in problem-solving contexts. ii) The testing interface can provide students with a calculation aid of the specified kind for these tasks	MP.1, MP.4, MP.5	Solve real-world and mathematical problems involving area, surface area, and volume.
5	6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks	MP.1, MP.5	Solve real-world and mathematical problems involving area, surface area, and volume.
5	6.G.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	i) The testing interface can provide students with a calculation aid of the specified kind for these tasks	MP.1, MP.4, MP.5	Solve real-world and mathematical problems involving area, surface area, and volume.
5	6.SP.5	Summarize numerical data sets in relation to their context, such as by: a. Reporting the number of observations. b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	i) Tasks provide students with a text-based and graphics-based overview of a numerical data set. This overview includes the necessary information for (a) and (b). Students must extract this information from the overview and enter or identify/select it as part of the task. ii) Tasks require students to choose a measure of center and a measure of variability; tasks are technology-enhanced to allow for rapid computation of the chosen measures. iii) With reference to the second clause in 6.SP.5c, tasks are technology-enhanced, e.g., to allow students to "tag" outliers, circle the bulk of the observations, etc. iv) With reference to 6.SP.6d, there is no wrong choice of measure of center--only a wrong interpretation of it. For example, students can choose the mean even for a distribution with outliers. However, tasks require students to identify/select from unambiguously true or false statements such as, "About half of the values are greater than the average"; "If this point were deleted from the data set, the median would not change"; etc. v) The testing interface can provide students with a calculation aid of the specified kind for these tasks.	MP.4	Summarize and describe distributions.

[40] If so, then students will not be able to return to tasks in Table 6-EOY (1a) or Table 6-EOY (2) after beginning work on these tasks

[41] See Appendix F (Revised), "Illustrations of Innovative Task Characteristics," particularly section F(A)(2), "Practice-Forward Tasks," and especially Table F.f, "General Cases of Practice-Forward Tasks (not a complete list)", in http://myflorida.com/apps/vbs/vbs_pdf.download_file?p_file=F10407_ITN201231AppendixF11012.pdf; see also Appendix D, "Supporting Design Documents for Mathematics," particularly section IV, "Operationalizing Assessment of the Mathematical Practices," and section V, "Practice-forward tasks," in http://myflorida.com/apps/vbs/adoc/F28718_AppendixPagesITN201231PARCCItemDevelopmentFinal.pdf

Grade 6 Summary

Number of **Tasks** by Type and Component

Type	PBA(1)	PBA(2)	PBA(3)	EOY	Total
I / 1 point	8			32	40
I / 2 points	2			9	11
I / 3 points				0	0
I / 4 points				1	1
II / 3 points		2			2
II / 4 points		2			2
III / 3 points			2		2
III / 6 points			1		1

43% of pts

Mean points per task (MPPT):[42]

Component	Points	Tasks	MPPT
PBA.1	12	10	1.20
PBA.2	14	4	3.50
PBA.3	12	4	4.00
EOY.1	25	25	1.00
EOY.2	7	7	1.00
EOY.3	22	10	2.20
Overall	**92**	**59**	**1.56**

Number of points by sub-claim (disjoint categories)

Claim Code	Sub-Claim	Gr. N	Gr. N-1	Total
1	A but not C or E	38	11	49
2	A and C	14		14
3	A and E	1		1
4	D	6	6[43]	12
5	B	16		16
	Total	**75**	**17**	**92**

Approximate Points by Grade, Cluster and Domain

Does not include Sub-Claim D Modeling/application, or previous grade. Italicized numbers are the sum of points located to the left and below. Some entries are approximate; roundoff errors may lead to apparent inconsistencies. True total is shown in parentheses.

Grade 6				70 *(69)*
6.RP			17	
6.RP.A	2	16		16
6.RP.Ax	14			
6.NS			17	
6.NS.A		5		5
6.NS.Ax	5			
6.NS.B		3		3
6.NS.Bx	3			
6.NS.C		9		9
6.NS.Cx	9			
6.EE			21	
6.EE.A		8		8
6.EE.Ax	8			
6.EE.B	2	9		9
6.EE.Bx	7			
6.EE.C		5		5
6.EE.Cx	45			
6.G			9	
6.G.A		9		9
6.G.Ax	9			
6.SP			5	
6.SP.A		2		2
6.SP.Ax	2			

[42] Mean points per task (MPPT) is tabulated as a rough measure of "surface richness" of the test. Note for comparison that MCAS grade 8 has MPPT = 54/42 = 1.28. A related heuristic is the fraction of total points arising from 1-point tasks (Type I.1). A target for this is 50%-60%, with high school at the higher end of the range.

[43] Securely held content used as the content scope for Sub-Claim D is assessed on grade level for modeling and should not be counted as part of the securely held (off grade level) points.

6.SP.B		3	3
6.SP.Bx	3		

Mathematical Practices

- Coverage constraint: Each MP is represented by at least one practice-forward task:
- Content integration constraint (in each content domain, there is at least one task associated with one or more MPs):
- Practice weight constraint: Percent of points from tasks that are practice-forward or practice-related: ≥ XX%